



Faculty of Economics and Business

**THE DAY OF WEEK EFFECT ON FINANCIAL COMPANIES
AMONG FINANCIAL SECTOR IN KUALA LUMPUR
COMPOSITE INDEX (KLCI)**

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DECLARATION

This work described in this Final Year Project, entitled
“The Day of Week Effects on Financial Companies among Financial Sector in Kuala Lumpur Composite Index (KLCI)”
is to the best of the author’s knowledge that of the author expect
where due reference is made.

Date Submitted

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ABSTRACT

The Day of Week Effects on Financial Companies among Financial Sector in Kuala Lumpur Composite Index (KLCI)

By

Chin Pea Lee

The global financial crisis currently is a latest crisis in the field of financial market. The preliminary evidence indicates that Efficient Market Hypothesis (EMH) might have been misplaced due to various anomalies. In Malaysian stock market, the existence of DOW effect is relatively less consistent and relatively little research conducted on market anomalies especially those concerning the DOW effect. The day-of-the-week (DOW) effects in the eight financial companies of Kuala Lumpur Composite Index (KLCI) using stock return data of individual financial companies conducted in the study. The study covering period from 2004 to 2011 and discovers the financial companies are highly efficient according the DOW effect. The study discovers the lowest mean returns of overall during entire period of global financial crisis on Monday for five financial companies out of eight financial companies. There is impact of global financial crisis on the studied sample.

ABSTRAK

Kesan Hari dalam Minggu pada Syarikat Kewangan di kalangan Sektor Kewangan dalam Indeks Komposit Kuala Lumpur (KLCI)

Oleh

Chin Pea Lee

Krisis kewangan global pada masa ini adalah krisis terkini dalam bidang pasaran kewangan. Bukti awal menunjukkan bahawa Hipotesis Pasaran Cepak (HPC) mungkin telah kena pada tempatnya kerana anomali pelbagai. Dalam pasaran saham Malaysia, kewujudan kesan Kesan hari dalam minggu (DOW) penyelidikan agak kurang konsisten dan agak sedikit yang dijalankan ke atas anomali pasaran terutama yang berkaitan dengan kesan DOW. Kesan DOW dalam tempoh lapan syarikat kewangan Indeks Komposit Kuala Lumpur (KLCI) menggunakan data pulangan saham syarikat-syarikat kewangan individu. Kajian yang meliputi tempoh dari 2004 hingga 2011 dan mencari syarikat-syarikat kewangan sangat berkesan mengikut kesan DOW. Kajian mendapati pulangan terendah min keseluruhan semasa tempoh seluruh krisis kewangan global pada hari Isnin selama lima syarikat kewangan daripada lapan syarikat kewangan. Terdapat kesan krisis kewangan global ke atas sampel yang dikaji.

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TABLE OF CONTENTS

List of Tables	x
List of Figures	xi

CHAPTER 1: INTRODUCTION

1.0	Introduction	1
1.1	Efficient Market Hypothesis (EMH)	2
1.2	Day of the Week (DOW) Effect	5
1.3	Overview of Malaysian Stock Market	8
1.4	The Impacts of Global Financial Crisis 2008/2009 on Stock Market	12
1.5	Impacts of Global Financial Crisis 2008/2009 on Malaysian Financial System	15
1.6	Problem Statements	18
1.7	Objectives of the Study	21
1.7.1	General Objective	21
1.7.2	Specific Objectives	
1.8	Significance of the Study	21
1.9	Scope of the Study	22
1.10	Organisation of the Study	23

CHAPTER 2: LITERATURE REVIEW

2.0	Introduction	24
2.1	Day of the Week (DOW) Effect	

2.1.1	Western Countries	25
2.1.2	Asian Countries	34
2.1.3	Western and Asian Countries	36
2.1.4	Malaysia	36

CHAPTER 3: METHODOLOGY

3.0	The Concept of Market Efficiency Anomalies	46
3.1	Sources of Data	47
3.2	Empirical Model	48
3.3	Jarque-Bera (JB) Test	49
3.4	Wald Test	49
3.5	Breusch-Godfrey Serial Correlation LM (BG-LM) Test	50
3.6	Autoregressive Conditional Heteroskedastic Lagrange Multiplier (ARCH-LM) Test	20

CHAPTER 4: EMPIRICAL RESULTS AND DISCUSSIONS

4.0	Introduction	51
4.1	Descriptive Statistics	51
4.2	Results of Ordinary Least Square (OLS) Model	60
4.3	Discussion	64
4.3.1	Descriptive	65
4.3.2	Day of the Week (DOW) Effect	68
4.3.3	Jarque-Bera (JB) Test	70
4.3.4	Wald Test	

4.3.5	Breusch-Godfrey Serial Correlation LM (BG-LM) Test	70
4.3.6	Autoregressive Conditional Heteroskedastic Lagrange Multiplier (ARCH-LM) Test	

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1	Conclusion	72
5.2	Implications of the Study	74
5.3	Recommendations for Further Study	75

REFERENCES		77
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LIST OF TABLES

Table	Title	Page
1	Summary of Empirical Studies Conducted for DOW Effect	40
2	Descriptive Statistics for Daily Returns of Entire Global Financial Crisis Period (2004-2011)	52
3	Descriptive Statistics for Daily Returns of Pre-Global Financial Crisis Period (2004-2007)	53
4	Descriptive Statistics for Daily Returns of Post-Global Financial Crisis Period (2008-2011)	54
5	Results of OLS Regression for Entire Global Financial Crisis Period (2004-2011)	61
6	Results of OLS Regression for Pre-global Financial Crisis Period (2004-2007)	62
7	Results of OLS Regression for Post-Global Financial Crisis Period (2008-2011)	63

LIST OF FIGURES

Table	Title	Page
1	Efficient Market Hypothesis (EMH)	3
2	Constituents of Bursa Malaysia Stock Market	10
3	Index of Kuala Lumpur Composite Index (KLCI)	16
4	Mean Returns of Entire Global Financial Crisis Period (2004-2011)	56
5	Mean Returns of Pre-global Financial Crisis Period (2004-2007)	57
6	Mean Returns of Post-Global Financial Crisis Period (2008-2011)	59
7	The Highest and Lowest Mean Return during Pre- and Post-global Financial Crisis	64

CHAPTER 1

INTRODUCTION

1.0 Introduction

Over the years, there have been many economists, statisticians and financiers' research in financial economics (Fama, 1965; Hamid, Suleman & Aksah, 2010). Kendall (1953) proposed Random Walk Theory (RWT) during the 1950s and 1960s to show the manner in which future stock prices move in a random motion that floats around the intrinsic value of the stock. Later in 1969, Random Walk Hypothesis (RWH) was expanded to Efficient Markets Hypothesis (EMH) (Fama, 1965). EMH as formulated by Fama (1965) shows how the proposition of current stock prices fully reflects the available information. Essentially, Random Walk Model (RWM) is the model that assumes the changes in future prices are unable to be predicted through historical price data (Hamid et al., 2010). Raja, Clement Sudhahar and Selvam (2009) pointed out that RWM is commonly used to explain the stock prices in the weak form of EMH.

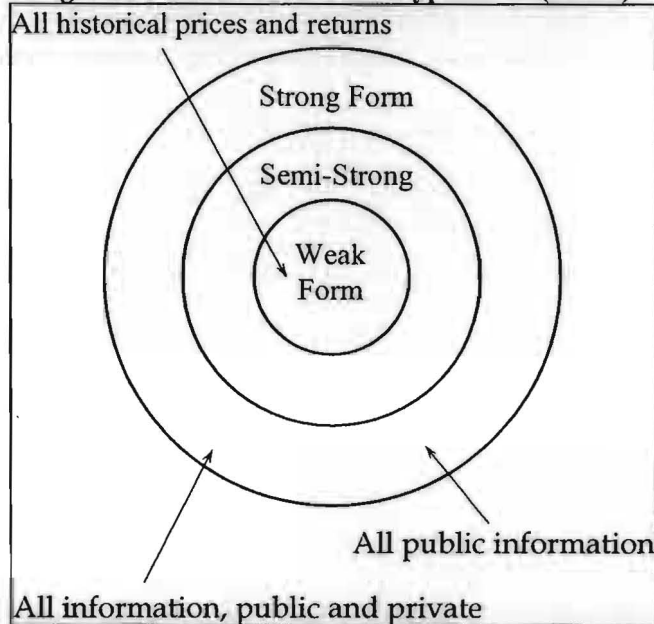
There are profit opportunities in the market that are represented by 'undervalued' and 'overvalued' of stocks. Investors are motivated to trade and make the stock market efficient in reflecting the movement of stock prices toward the present value of future cash flows. In other words, the trade leads to the stock prices which reflect intrinsic values in the efficient market. As a result, investors cannot earn abnormal profits because the prices reflect intrinsic value (Tamara, 2010). As

further stated by Tamara (2010), the new information is randomly affecting the movement of stock price in an efficient. RWT expresses a stock market which is analysed as random walk to be an efficient market that reacts rapidly to the new information. When the stock prices reflect latest available information, the investors may be unable to predict the future stock prices in order to make profits. Most of the research (see for examples, Fama, 1965; Khan & Sana Ikram, 2010; Raja et al. 2009) believed that stock prices are incapable to be used as a prediction measure due to their random movement.

1.1 Efficient Market Hypothesis (EMH)

EMH theory describes the difficulty to make profit from predicting the stock prices' movements because the current stock prices are reflecting all available information (Brown & Reilly, 2009; Hamid et al., 2010; Raja et al., 2009; Tamara, 2010). Indeed, the stock prices might have been adjusted before the investors have traded and gained profit from new information. EMH stated clearly that any new information that affects the stock prices may cause the stock prices to be unknown and appear randomly in future (Hamid et al., 2010). There are three degrees of market efficiency which are weak form, semi-strong form and strong form according to different levels of measurement of influence provided by the available information toward the stock prices as depicted in Figure 1.

Figure 1: Efficient Market Hypothesis (EMH)



Sources: The Efficient Markets Hypothesis, Metropolitan State College.

Weak form EMH occurs when current stock prices fully reflect all stock market information comprising historical stock prices, rate of return, trading volume data and other market-generated information (Fama, 1965; Raja et al, 2009). Past prices, trends, and historical news have reflected fully in the current market prices and have no relationship to future stock prices. Many investors attempt to gain profits by analysing the past market price and trading volume data by technical analysis to decide their current investments. The technical analysis is able to identify the market price whether it is overpriced or underpriced. This usually helps investors to decide whether to sell when the stock is overpriced or buy when it is underpriced. Tamara (2010) sustained the statement by Brown and Reilly (2009) that technical analysis of weak form EMH could not be used to predict because the stock prices have already reflected the information.

In terms of semi-strong EMH, Brown and Reilly (2009) as well as Raja et al. (2009) agreed that it demonstrates all stock prices are fully and rapidly adjusted to the publication information such as earnings and dividend announcements, price-to-earnings (P/E) ratios, dividend-yield (D/P) ratios, price-book value (P/BV) ratios, stock splits, information about economy and politics. Current stock prices have reflected all publicly available past and present information. Investors may measure future stock according to announcement of return prediction and event studies. There are time series test for abnormal return, quarterly earnings reports, January anomaly and other calendar effects in the return of prediction studies. Investors can make decisions based on the published information to make profits. Yet investors must take a lot of time to gather all necessary information to analyse the stock prices effectively. However, in semi-strong EMH, investors are not able to predict the stock prices in order to make profit based on fundamental or technical analysis (Tamara, 2010).

In the strong-form EMH, current stock prices fully reflect all existing information, both publicly available information and information not yet disclosed (Brown & Reilly, 2009; Fama, 1965; Tamara, 2010). Hence, it implies that no investors are able to make profits due to information efficiency which are cost-free and available to everyone at the same time (Hamid et al., 2010). There are no investors who can access the information relevant to monopoly of formation of prices or even gather private information. However, there are corporate insiders, stock exchange specialists, stock analysts and professional money managers who are

able to analyse and predict the stock prices from their professional's abilities and insiders' information (Brown & Reilly, 2009).

1.2 Day of the Week (DOW) Effect

According to Aydogan and Booth (1999) and Kenourgios and Samitas (2008), calendar anomalies are very common in financial markets. Anomaly is a deviation from the normal, which does not exist in the efficient market (Agathee, 2008; Fama, 1991). Anwar and Mulyadi (2009) noted that the deviations from the normal are called anomalies because they cannot be explained by traditional asset pricing models including EMH. This finding is similar to the study by Fama (1991), Malkeil (2003) and Schwert (2003). The calendar effect is a theory that claims certain time in which stock prices are likely to rise or fall than other time (Zainal Abidin & Wan Mahmood, 2007). The occurrences of the anomalies enable investors to predict stock prices based on developed trading strategies with the returns of the noted time (Fama, 1991). Prokop (2010) and Tachiwou (2010) fully supported the existence of anomalies and proved market inefficiency that investors could earn abnormal profits by taking advantage of their buying and selling strategies with proper timing as also shown in the studies by Boudreaux (1995), Nath and Dalvi (2004) as well as Sakaraukas and Kriksciuniene (2007).

Most studies reported there are many kinds of calendar anomalies such as day of the week (DOW) effect also known as weekday effect, weekend effect, or Monday effect, January effect (turn of the year effect), turn of the month effect and

the holiday effect (see for examples, Nayan & Fatta Bahadur, 2005; Silva, 2010). The January effect indicates the stock which obtains abnormally higher returns during January and the turn of the month effect defines the patterns on the last days and the first days of the months. The holiday effect is the abnormal stock returns before or after the holidays (Silva, 2010).

Dima and Milos (2009) as well as Silva (2010) discovered the most famous calendar anomalies is the DOW effect. The DOW effect is a theory when the stock average return is significantly negative or lower on Mondays than other weekdays (Zainal Abidin & Wan Mahmood, 2007). The highest returns are usually on Fridays as compared to the other weekdays, even though the expectations of the stock price returns are higher with longer period and greater assumed risks (Lakonishok & Maberly, 1990). The DOW effect is a form of anomaly which contradicts the EMH as mentioned in the studies by Patev, Lyroudi and Kanaryan (2002) followed by Angelidis and Lyroudi (2004).

Moreover, Angelidis and Lyroudi (2004), Nayan and Fatta Bahadur (2005) demonstrated two hypotheses that describe the DOW effect, calendar time hypothesis and trading time hypothesis. The calendar time hypothesis refers to the continuously process in generating stock return. This shows Monday's average return which is estimated from the closing price on Friday and the closing price on Monday as a result of the difference with other weekdays' average returns. French (1980) and Nayan and Fatta Bahadur (2005) discovered that Monday's average return were three times higher than the average returns of the other weekdays. As for

the trading time hypothesis, it describes a transaction that generates returns of stocks in which the average stock return will be the same for all the weekdays (Angelidis & Lyroutdi, 2004; Nayan & Fatta Bahadur, 2005).

In the study by Tripathy (2010), the DOW effect is on different day of the week and brings out different stock returns. The DOW effect appears when there is a difference in returns between a particular trading day and a couple of trading days as compared to the rest of the trading weekdays. Monday effect shows that the negative Monday's average return is significantly lower than the other weekdays' average returns as explored by several studies (see for examples, Apolinario et al., 2006; Charles et al., 2002; Dicle & Hassan, 2007). Similar findings are noted in the studies by Anwar and Mulydai (2009), Maheran and Naziman (2010) and Prokop (2010) as well as the study by Heinien and Puttonen (2011) and Yat et al. (2011). Fridays normally present the highest return as compared to other weekdays (Balaban, 1994; Berument & Kiymaz, 2001; Kein & Stambugh, 1984).

Patev et al. (2002) revealed the stock prices fall on Monday and rise again on Friday because of investors' psychological influences that cause anomaly. This is because most investors treat Monday as the worst weekday because it is the first working day while Friday as the best because it is the last working day. Consequently, investors feel less desirable on Monday and feel desirable on Friday that affects sales and purchases respectively. Increasing of sales causes the prices fall and increasing of purchase causes the prices raise.

Tripathy (2010) indicated the DOW effect is negatively influenced by unfavorable information arriving after the Friday's closing of stock market. Investors will sell securities on Monday that affect the securities prices to drop on Monday. This causes the trend of stock market to start downwards on Monday and end upwards on Friday in most of the capital markets. Moreover, Tuesday effect is negative as well because the unfavourable news arrives in the weekend, which can be affected by one day lag as discovered by Tripathy (2010). However, as claimed by Patev et al. (2002), there is no explanation for Tuesday's negative return while investors can understand anomaly to make decision to increase their return.

1.3 Overview of Malaysian Stock Market

According to Bursa Malaysia (2011), Malaysian stock market is one of the biggest stock markets in Southeast Asia with a history over 50 years. Bursa Malaysia was first established in 1990 as a first formal organization when 15 stockbrokers formed Singapore Stockbrokers' Association. It offers equity-related risk management tools and connects to portfolio management strategies. There was no public trading of stock at the time until 1960, when the Malayan Stock Exchange was formed.

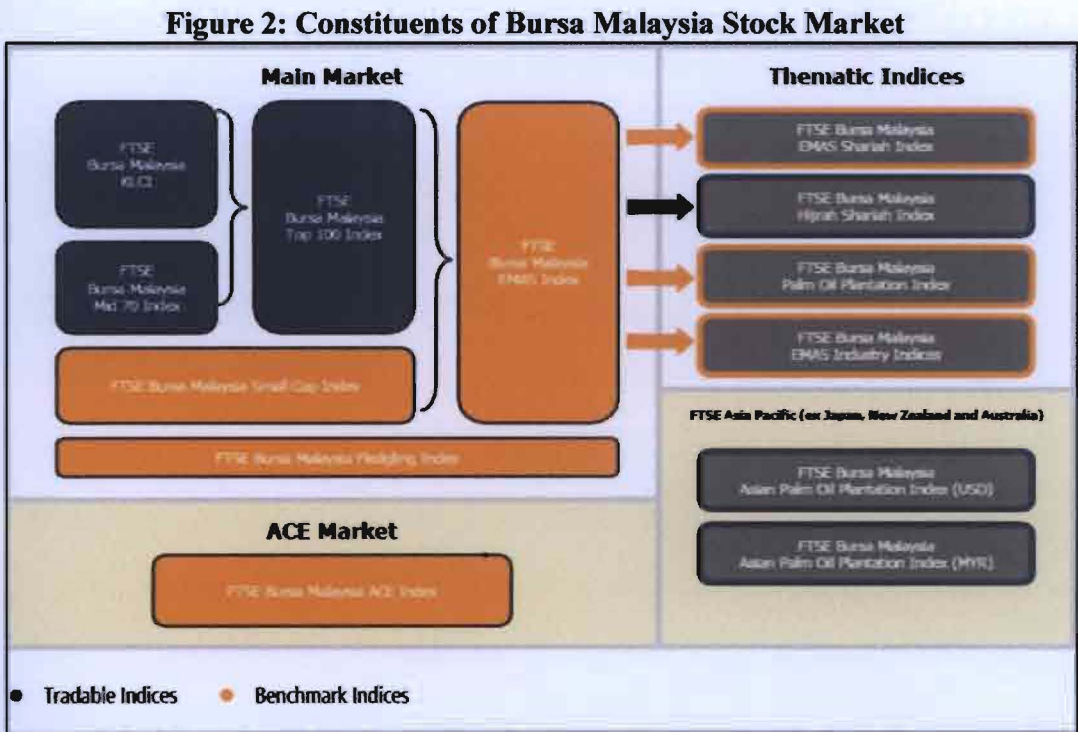
In 1961, the Board system was introduced in Singapore and Kuala Lumpur trading rooms. They were linked by direct telephone lines through the market with the same stocks and shares listed at a series of specific prices on both boards. In 1964, the Malayan Stock Exchange was renamed to Stock Exchange of Malaysia.

Stock Exchange of Malaysia and Singapore were established when the secession of Singapore from Malaysia in 1965 due to currency interchangeability between Malaysia and Singapore and they diverged separately into Kuala Lumpur Stock Exchange Berhad (KLSEB) and the Stock Exchange of Singapore (SES). Subsequently, Kuala Lumpur Stock Exchange (KLSE) took over the operations of the Kuala Lumpur Stock Exchange Berhad in 1994 (Bursa Malaysia, 2011).

In 2004, KLSE was renamed to Bursa Malaysia Berhad that converted from a not-for-profit organization limited by the guarantee of its membership to an entity limited by its shares. Securities Commission supervises the operations of Bursa Malaysia that falls under the authority of the Ministry of Finance Malaysia. This offers investors stock trading on a regulated exchange with similar rules and regulations like other stock exchanges. Bursa Malaysia, as a central market place to manage risk exposure, offers a competitive fund raising and investment with various types for stocks transactions between investors (Bursa Malaysia, 2011).

According to Financial Times Stock Exchange (FTSE) and Bursa (2011), the FTSE Bursa Malaysia Index Series represents the performance of companies, preparing investors with a set of indices differentiates by eligibility requirements, which measure the performance of the major capital and industry segments of the Malaysian and regional market. There are two stock markets in Malaysia, which are Main market and Access Certainty Efficiency (ACE) market. The indices of the Main Market are FTSE Bursa Malaysia Kuala Lumpur Composite Index (KLCI), FTSE Bursa Malaysia Mid 70 Index, FTSE Bursa Malaysia Top 100 Index, FTSE

Bursa Malaysia Small Cap Index, FTSE Bursa Malaysia EMAS Index, FTSE Bursa Malaysia EMAS Industry Indices, FTSE Bursa Malaysia EMAS Shariah Index, FTSE Bursa Malaysia Hijrah Shariah Index, FTSE Bursa Malaysia Fledgling Index and FTSE Bursa Malaysia Palm Oil Plantation Index (FTSE & Bursa, 2011).



Sources: FTSE Bursa Malaysia KLCI Review Changes Overview-December 2011, FTSE.

As shown in Figure 2, FTSE Bursa KLCI index comprises 30 largest companies by full market capitalisation. FTSE Bursa Malaysia Mid 70 Index comprises the next 70 companies by full market capitalization. The constituents of FTSE Bursa Malaysia KLCI and the FTSE Bursa Malaysia Mid 70 Index form the FTSE Bursa Malaysia Top 100 Index. FTSE Bursa Malaysia Small Cap Index is the index which consists of those eligible companies within the top 98 percent of the Main Market by full market capitalisation but is not a component of the FTSE Bursa

Malaysia Top 100 Index. Moreover, FTSE Bursa Malaysia EMAS Index is the combination of FTSE Bursa Malaysia Top 100 Index and the FTSE Bursa Malaysia Small Cap Index. However, FTSE Bursa Malaysia EMAS Industry Indices comprises the constituents of the FTSE Bursa Malaysia EMAS Index categorised into 10 industries, 19 supersectors and 39 sector indices (FTSE & Bursa, 2011). According to FTSE (2011), subsectors will be grouped into Sectors in such a way that general industrial and economic themes may be common to all companies in the sector.

FTSE Bursa Malaysia EMAS Shariah Index is the constituents of the FTSE Bursa Malaysia EMAS Index that are Shariah compliant according to the Securities Commission's Shariah Advisory Council (SAC) screening methodology. FTSE Bursa Malaysia Hijrah Shariah Index comprises 30 largest companies by full market capitalisation of the FTSE Bursa Malaysia EMAS Index that requires compliance with Yasaar and the Securities Commission's SAC screening methodology. FTSE Bursa Malaysia Fledgling Index covers the Main Market companies but not in the top 98 percent by full market capitalisation and are not an element of the FTSE Bursa Malaysia EMAS Index. FTSE Bursa Malaysia Palm Oil Plantation Index is the index constituents of the FTSE Bursa Malaysia EMAS Index that derive substantial revenue from palm oil activities (FTSE & Bursa, 2011).

On the other hand, an index based on the ACE Market is FTSE Bursa Malaysia ACE Index that comprises all companies listed on the ACE Market. Index based on the regional Asia Pacific market is FTSE Bursa Malaysia Asian Palm Oil Plantation

Index that includes companies from the universes of developed, advanced emerging and secondary emerging countries as categorized by FTSE in the Asia Pacific region excluding Japan, Australia and New Zealand that derive substantial revenue from palm oil activities (FTSE & Bursa, 2011).

1.4 The Impacts of Global Financial Crisis 2008/2009 on Stock Market

Malik et al. (2009) and Olowe (2010) documented the housing bubble in the United States (US) which caused the global financial crisis in 2006 and has become a global phenomenon. It has resulted tragic impacts on the world economies and financial markets. Naude (2009), Singh (2009) and Olowe (2010) pointed out that consumer confidence indexes were falling all over the world, as were housing prices. The crisis happened at the end of 2007 and caused huge impacts on all financial markets around the world in the early of 2008. The crisis have caused by the subprime mortgage crisis in the United States. It happened due to the failure or merger of several large United States-based financial firms that were exposed to packaged subprime loans and credit default swaps. On September 7, 2008, Fannie Mae (Federal National Mortgage Association) and Freddie Mac (Federal Home Loan Mortgage Corporation) were taken over and run by the United States Federal Housing Finance Agency that owned and guaranteed about half of the \$12 trillion of U.S. mortgage market. This caused panic to every home mortgage lender and Wall Street bank as pointed out in the studies by Malik et al. (2009), Naude (2009) and Singh (2009).

The crisis rapidly developed into a global credit crisis after Lehman Brothers and several other financial institutions failed in the United States. It resulted a number of bank failures in Europe and caused reductions in the value of equities especially in stocks and commodities worldwide. In the United States, 15 banks have failed, while several others have survived through government intervention. It has caused central banks around the world to reduce interest rates and implement various economic stimulus packages to boost up economic growth and sustain investor confidence in the financial markets (Olowe, 2010).

Cali, Massa and Te Velde (2008) discovered that stock exchanges of Asia and Europe have crashed, resulted collective losses of the London, Paris and Frankfurt markets more than \$350 billion, which is similar with the findings by Malik et al. (2009). The current financial crisis financially affects developing countries and spillovers to overall of the stock markets. In the study by Abu Hatab (2009), the Egyptian Stock Exchange declined long before the crisis because of a number of factors that worsen the performance. By late 2007, foreigners sold their assets in order to end their enterprises in their home countries due to the mortgage crisis. This caused the second chock defined as May economic decrees to happen and led to inflation which negatively affected expectation of investors about the performance of the stock exchange and Egyptian economy. The index fell 20 percent at the beginning of August 2008. The crisis worsened the Egyptian Stock Exchange, which continued to drop 43 percent up to the end of 2008. Egyptian Stock Exchange was one of the worst hit with total decline estimated at 56 percent in one year (United Nations, 2009).